RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

| Application Serial Number: | <u> 10/523,706</u> |
|----------------------------|--------------------|
| Source: | Pullo |
| Date Processed by STIC: | 2/26/65 |

ENTERED



PCT

RAW SEQUENCE LISTING DATE: 02/26/2005 PATENT APPLICATION: US/10/523,706 TIME: 10:45:31

Input Set : A:\EX03-059C-USpatentin.txt
Output Set: N:\CRF4\02262005\J523706.raw

```
3 <110> APPLICANT: EXELIXIS, INC.
      5 <120> TITLE OF INVENTION: PSMCS AS MODIFIERS OF THE RB PATHWAY AND METHODS OF USE
      7 <130> FILE REFERENCE: EX03-059C-US
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/523,706
C--> 9 <141> CURRENT FILING DATE: 2005-02-08
      9 <150> PRIOR APPLICATION NUMBER: US 60/401,737
     10 <151> PRIOR FILING DATE: 2002-08-07
     12 <150> PRIOR APPLICATION NUMBER: US 60/428,872
     13 <151> PRIOR FILING DATE: 2002-11-25
     15 <160> NUMBER OF SEQ ID NOS: 11
     17 <170> SOFTWARE: PatentIn version 3.2
     19 <210> SEQ ID NO: 1
     20 <211> LENGTH: 1478
     21 <212> TYPE: DNA
     22 <213> ORGANISM: Homo sapiens
     24 <400> SEQUENCE: 1
     25 ccattgtgct ctaaagggaa ggtgctgtgt aatcattaag gagcggaggc ttttggagct
                                                                               60
     27 gctaaaatgc cggattacct cggtgccgat cagcggaaga ccaaagagga tgagaaggac
                                                                              120
     29 gacaagccca tccgagctct ggatgagggg gatattgcct tgttgaaaac ttatggtcag
                                                                              180
     31 agcacttact ctaggcagat caagcaagtt gaagatgaca ttcagcaact tctcaagaaa
                                                                              240
                                                                              300
     33 attaatgage teactggtat taaagaatet gacactggee tggceecace ageactetgg
     35 gatttggctg cagataagca gacactccag agtgaacagc ctttacaggt tgccaggtgt
                                                                              360
                                                                              420
     37 acaaagataa tcaatgctga ttcggaggac ccaaaataca ttatcaacgt aaagcagttt
     39 gccaagtttg tggtggacct tagtgatcag gtggcaccta ctgacattga agaagggatg
                                                                              480
     41 agagtgggcg tggatagaaa taaatatcaa attcacattc cattgcctcc taagattgac
                                                                              540
     43 ccaacaqtta ccatgatqca qqtqqaaqaq aaacctgatg tcacatacag tgatgttggt
                                                                              600
                                                                              660
     45 qqctqtaaqq aacaqattqa qaaactqcqa qaagtagttg aaaccccatt acttcatcca
     47 qaqaqqtttq tqaaccttqq cattqaqcct cccaaggqcg tqctgctctt tggtccaccc
                                                                              720
                                                                              780
     49 ggtacaggca agacactetg tgegegggca gttgctaate ggactgatge gtgctteatt
     51 cgagttattg gatctgagct tgtacagaaa tacgtcggtg agggggctcg aatggttcgt
                                                                              840
     53 gaactetttg aaatggeeag aacaaaaaaa geetgeetta tettetttga tgaaattgat
                                                                              900
     55 gctattggag gggctcgttt tgatgatggt gctggaggtg acaatgaagt gcagagaaca
                                                                              960
     57 atgttggaac tgatcaatca gcttgatggt tttgatcctc gaggcaatat taaagtgctg
                                                                             1020
     59 atqqccacta acaqacctqa tactttgqat ccagcactqa tqaggccagg gagattggat
                                                                             1080
     61 agaaaaattg aatttagctt gcccgatcta gagggtcgga cccacatatt taagattcac
                                                                             1140
     63 gctcgttcaa tgagtgttga aagagatatc agatttgaac tgttagcacg actgtgtcca
                                                                             1200
     65 aatagcactg gtgctgagat tagaagcgtc tgcacagagg ctggtatgtt tgccatcaga
                                                                             1260
     67 gcacggcgaa aaattgctac cgagaaggat ttcttggaag ctgtaaataa ggtcattaag
                                                                             1320
     69 tottatgoca aattoagtgo tactootogt tacatgacat acaactgaac cotgaaggot
                                                                             1380
     71 ttcaaqtqaa aactttaaat tqqaatccta accttatata qacttqttaa taaccaattc
                                                                             1440
     73 ataaacaaat aaatggcttc aactttagag cacaatgg
                                                                             1478
     76 <210> SEO ID NO: 2
```

77 <211> LENGTH: 1478

```
78 <212> TYPE: DNA
79 <213> ORGANISM: Homo sapiens
81 <400> SEOUENCE: 2
82 ccattgtgct ctaaagggaa ggtgctgtgt aatcattaag gagcggaggc ttttggagct
                                                                          60
84 gctaaaatgc cggattacct cggtgccgat cagcggaaga ccaaagagga tgagaaggac
                                                                         120
86 qacaaqeeca teeqaqetet qqatqaqqqq qatattqeet tqttqaaaac ttatqqteaq
                                                                         180
88 agcacttact ctaggcagat caagcaagtt gaagatgaca ttcagcaact tctcaagaaa
                                                                         240
90 attaatqaqc tcactqqtat taaaqaatct qacactqqcc tqqccccacc aqcactctqq
                                                                         300
92 gatttggetg cagataagca gacactecag agtgaacage etttacaggt tgecaggtgt
                                                                         360
94 acaaagataa tcaatgctga ttcggaggac ccaaaataca ttatcaacgt aaagcagttt
                                                                         420
96 qccaaqtttq tqqtqqacct taqtqatcaq qtqqcaccta ctqacattqa aqaaqqqatq
                                                                         480
98 agaqtqqqcq tqqataqaaa taaatatcaa attcacattc cattqcctcc taaqattqac
                                                                         540
100 ccaacagtta ccatgatgca ggtggaagag aaacctgatg tcacatacag tgatgttggt
                                                                          600
102 ggctgtaagg aacagattga gaaactgcga gaagtagttg aaaccccatt acttcatcca
                                                                          660
104 gagaggtttg tgaacettgg cattgageet eecaagggeg tgetgetett tggteeacee
                                                                          720
106 ggtacaggca agacactctg tgcgcgggca gttgctaatc ggactgatgc gtgcttcatt
                                                                          780
108 cgagttattg gatctgagct tgtacagaaa tacgtcggtg agggggctcg aatggttcgt
                                                                          840
110 gaactetttg aaatggeeag aacaaaaaaa geetgeetta tettetttga tgaaattgat
                                                                          900
112 gctattggag gggctcgttt tgatgatggt gctggaggtg acaatgaagt gcagagaaca
                                                                          960
114 atgttggaac tgatcaatca gcttgatggt tttgatcctc gaggcaatat taaagtgctg
                                                                         1020
116 atggccacta acagacctga tactttggat ccagcactga tgaggccagg gagattggat
                                                                         1080
118 agaaaaattg aatttagctt gcccgatcta gagggtcgga cccacatatt taagattcac
                                                                         1140
120 gctcgttcaa tgagtgttga aagagatatc agatttgaac tgttagcacg actgtgtcca
                                                                         1200
122 aatagcactg gtgctgagat tagaagcgtc tgcacagagg ctggtatgtt tgccatcaga
                                                                         1260
124 gcacqqcqaa aaattqctac cqaqaaqqat ttcttqqaaq ctqtaaataa qqtcattaaq
                                                                         1320
126 tettatgeca aatteagtge tacteetegt tacatgaeat acaactgaac eetgaagget
                                                                         1380
128 ttcaagtgaa aactttaaat tggaatccta accttatata gacttgttaa taaccaattc
                                                                         1440
                                                                         1478
130 ataaacaaat aaatggcttc aactttagag cacaatgg
133 <210> SEQ ID NO: 3
134 <211> LENGTH: 1516
135 <212> TYPE: DNA
136 <213> ORGANISM: Homo sapiens
138 <400> SEQUENCE: 3
139 ggcacgagga ttaaggagcg gaggcttttg gagctgctaa aatgccggat tacctcggtg
                                                                           60
                                                                          120
141 ccgatcagcg gaagaccaaa gaggatgaga aggacgacaa gcccatccga gctctggatg
143 agggggatat tgccttgttg aaaacttatg gtcagagcac ttactctagg cagatcaagc
                                                                          180
                                                                          240
145 aagttgaaga tgacattcag caacttctca agaaaattaa tgagctcact ggtattaaag
                                                                          300
147 aatctgacac tggcctggcc ccaccagcac tctgggattt ggctgcagat aagcagacac
149 tecagagtga acageettta caggttgeca ggtgtacaaa gataateaat getgattegg
                                                                          360
151 aggacccaaa atacattatc aacgtaaagc agtttgccaa gtttgtggtg gaccttagtg
                                                                          420
                                                                          480
153 atcaggtggc acctactgac attgaagaag ggatgagagt gggcgtggat agaaataaat
155 atcaaattca cattccattq cctcctaaqa ttqacccaac aqttaccatq atqcaqqtqq
                                                                          540
157 aagagaaacc tgatgtcaca tacagtgatg ttggtggctg taaggaacag attgagaaac
                                                                          600
159 tgcgagaagt agttgaaacc ccattacttc atccagagag gtttgtgaac cttggcattg
                                                                          660
161 agcctcccaa gggcgtgctg ctctttggtc cacccggtac aggcaagaca ctctgtgcgc
                                                                          720
163 gggcagttgc taatcggact gatgcgtgct tcattcgagt tattggatct gagcttgtac
                                                                          780
165 agaaatacgt cggtgagggg gctcgaatgg ttcgtgaact ctttgaaatg gccagaacaa
                                                                          840
167 aaaaagcctg ccttatcttc tttgatgaaa ttgatgctat tggaggggct cgttttgatg
                                                                          900
                                                                          960
169 atggtgctgg aggtgacaat gaagtgcaga gaacaatgtt ggaactgatc aatcagcttg
```

| 171 | atggttttga tcctcgagg | r aatattaaan | tactaataac | cactaacada | cctgatactt | 1020 |
|-----|----------------------|--------------|------------|------------|------------|------|
| | tggatccagc actgatgag | | | | | 1080 |
| | atctagaggg tcggaccca | | | | | 1140 |
| | atatcagatt tgaactgtt | _ | | | | 1200 |
| | gcgtctgcac agaggctgg | | | | | 1260 |
| | aggatttctt ggaagctgt | | | | | 1320 |
| | ctcgttacat gacatacaa | | | | | 1380 |
| | tcctaacctt atatagact | | | | | 1440 |
| | tgtatgcttt tttccatat | | | | | 1500 |
| | aaaaaaaaaa aaaaaa | ceceeegea | acacaacaa | aggegaeeee | caacgccaaa | 1516 |
| | <210> SEQ ID NO: 4 | | | | | 1310 |
| | <211> LENGTH: 1545 | | | | | |
| | <212> TYPE: DNA | | | | | |
| | <213> ORGANISM: Homo | saniens | | | | |
| | <400> SEQUENCE: 4 | bapiens | | | | |
| | gaagacacca ccggaagca | a ggaaggtgct | gtgtaatcat | taaggagcgg | aggettttgg | 60 |
| | agctgctaaa atgccggat | | | | | 120 |
| | ggacgacaag cccatccga | | | | | 180 |
| | tcagagcact tactctagg | | | | | 240 |
| | gaaaattaat gagctcact | | | | | 300 |
| | ctgggatttg gctgcagat | | | | | 360 |
| | gtgtacaaag ataatcaat | | | | | 420 |
| | gtttgccaag tttgtggtg | | | | | 480 |
| | gatgagagtg ggcgtggat | | | | | 540 |
| | tgacccaaca gttaccatg | | | | | 600 |
| | tggtggctgt aaggaacag | | | | | 660 |
| | tccagagagg tttgtgaac | | | | | 720 |
| | acceggtaca ggcaagaca | | | | | 780 |
| | cattcgagtt attggatct | | | | | 840 |
| | tcgtgaactc tttgaaatg | | | | | 900 |
| | tgatgctatt ggaggggct | | | | | 960 |
| | aacaatgttg gaactgatc | | | | | 1020 |
| | gctgatggcc actaacaga | | | | | 1080 |
| | ggatagaaaa attgaattt | | | | | 1140 |
| | tcacgctcgt tcaatgagt | | | | | 1200 |
| | tccaaatagc actggtgct | | | | | 1260 |
| | cagagcacgg cgaaaaatt | | | | | 1320 |
| | taagtcttat gccaaattc | | | | | 1380 |
| | ggctttcaag tgaaaactt | | | | | 1440 |
| | attcataaac aaataaatg | | | | | 1500 |
| | tataataaaa ggtgatttc | | | | | 1545 |
| | <210> SEQ ID NO: 5 | _ | | | | |
| 252 | <211> LENGTH: 1591 | | | | | |
| 253 | <212> TYPE: DNA | | | | | |
| 254 | <213> ORGANISM: Homo | sapiens | | | | |
| 256 | <400> SEQUENCE: 5 | | | | | |
| 257 | ggcacgagga ttcgctgct | c cgcagcacgg | ccggagctgg | tccggtcaag | agtcgggatt | 60 |
| 259 | tgtggggaga ggttttcca | c tggtcaagag | aaggctttaa | gaaagacggt | attaatctcc | 120 |
| 261 | cgttgcggct cccgcctgg | t cccatcttct | gcccgctcct | ccaggaaatg | aatctgctgc | 180 |

| 263 | cgaatattga | gagtccagtg | actcggcagg | agaagatggc | gaccgtgtgg | gatgaggccg | 240 |
|--|---|--|--|---|--|--|--|
| 265 | agcaagatgg | aattggggag | gaggtgctca | agatgtccac | ggaggagatc | atccagcgca | 300 |
| 267 | cacggctgct | ggacagtgag | atcaagatca | tgaagagtga | agtgttgaga | gtcacccatg | 360 |
| 269 | agctccaagc | catgaaggac | aagataaaag | agaacagtga | gaaaatcaaa | gtgaacaaga | 420 |
| | ccctgccgta | | | | | | 480 |
| 273 | aggaggatgg | tgccaatatt | gacctggact | cccagaggaa | gggcaagtgt | gctgtgatca | 540 |
| | aaacctctac | | | | | | 600 |
| | taaagccagg | | | | | | 660 |
| | ccacagagta | | | | | | 720 |
| | acagtgacat | | | | | | 780 |
| | caatgaacca | | | | | | 840 |
| | tgtatgggcc | | | | | | 900 |
| | aggccacctt | | | | | | 960 |
| | ccaagctagt | | | | | | 1020 |
| | ttgatgagtt | | | | | | 1080 |
| 293 | aggtgcagag | gacaatgctg | gagcttctga | accagctgga | tggcttccag | cccaacaccc | 1140 |
| 295 | aagttaaggt | aattgcagcc | acaaacaggg | tggacatcct | ggaccccgcc | ctcctccgct | 1200 |
| | cgggccgcct | | | | | | 1260 |
| | tcatgcagat | | | | | | 1320 |
| | cccgctgcac | | | | | | 1380 |
| | tgatcgcact | | | | | | 1440 |
| | tggaggtgca | | | | | | 1500 |
| 307 | gccccagtct | cacggctgaa | gtgcgcaata | aaagatggtt | tagggtccct | gccaaaaaaa | 1560 |
| | aaaaaaaaa | | | - | | | 1591 |
| 312 | <210> SEQ 1 | ID NO: 6 | | | | | |
| | | | | | | | |
| 313 | <211> LENGT | TH: 1545 | | | | | |
| | <211> LENGT <212> TYPE: | | | | | | |
| 314 | | DNA | sapiens | | | | |
| 314 315 | <212> TYPE: | : DNA NISM: Homo s | sapiens | | | | |
| 314 315 317 | <212> TYPE: <213> ORGAN | : DNA NISM: Homo : ENCE: 6 | | ggtcgggtca | agagteggga | tttgtgggga | 60 |
| 314 315 317 318 | <212> TYPE: <213> ORGAN <400> SEQUE | : DNA NISM: Homo : ENCE: 6 tccgcagcac | ggccggagct | | | | 60 120 |
| 314 315 317 318 320 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc | : DNA VISM: Homo s ENCE: 6 tccgcagcac actggtcaag | ggccggagct agaaggcttt | aagaaagacg | gtattaatct | cccgttgcgg | |
| 314 315 317 318 320 322 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc | : DNA VISM: Homo s ENCE: 6 tccgcagcac actggtcaag gtcccatctt | ggccggagct agaaggcttt ctgcccgctc | aagaaagacg ctccaggaaa | gtattaatct tgaatctgct | cccgttgcgg gccgaatatt | 120 |
| 314 315 317 318 320 322 324 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg | : DNA NISM: Homo s ENCE: 6 tccgcagcac actggtcaag gtcccatctt tgactcggca | ggccggagct agaaggcttt ctgcccgctc ggagaagatg | aagaaagacg ctccaggaaa gcgaccgtgt | gtattaatct tgaatctgct gggatgaggc | cccgttgcgg gccgaatatt cgagcaagat | 120 180 |
| 314 315 317 318 320 322 324 326 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag | : DNA VISM: Homo s ENCE: 6 tccgcagcac actggtcaag gtcccatctt tgactcggca aggaggtgct | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga | gtattaatct tgaatctgct gggatgaggc tcatccagcg | cccgttgcgg gccgaatatt cgagcaagat cacacggctg | 120 180 240 |
| 314 315 317 318 320 322 324 326 328 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg | : DNA VISM: Homo sonce: 6 tccgcagcac actggtcaag gtcccatctt tgactcggca aggaggtgct agatcaagat | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa | 120 180 240 300 |
| 314 315 317 318 320 322 324 326 328 330 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg | EDNA SISM: Homo some control of the | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg | 120 180 240 300 360 |
| 314 315 317 318 320 322 324 326 328 330 332 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg gccatgaagg | EDNA SISM: Homo since: 6 tccgcagcac actggtcaag gtcccatctt tgactcggca aggaggtgct agatcaagat acaagataaa ccaacgtcat | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt cgagctcctg | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca gatgttgatc | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa ctaatgacca | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg agaggaggat | 120 180 240 300 360 420 |
| 314 315 317 318 320 322 324 326 328 330 332 334 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg gccatgaagg taccttgtct | EDNA VISM: Homo solution ENCE: 6 tccgcagcac actggtcaag gtcccatctt tgactcggca aggaggtgct agatcaagat acaagataaa ccaacgtcat ttgacctgga | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt cgagctcctg ctcccagagg | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca gatgttgatc aagggcaagt | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa ctaatgacca gtgctgtgat | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg agaggaggat caaaacctct | 120 180 240 300 360 420 480 |
| 314 315 317 318 320 322 324 326 328 330 332 334 336 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg gccatgaagg taccttgtct ggtgccaata | EDNA VISM: Homo some control of the | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt cgagctcctg ctcccagagg tcctgtgatt | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca gatgttgatc aagggcaagt gggttggtgg | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa ctaatgacca gtgctgtgat atgctgaaaa | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg agaggaggat caaaacctct gctaaagcca | 120 180 240 300 360 420 480 540 |
| 314 315 317 318 320 322 324 326 328 330 332 334 336 338 340 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg gccatgaagg taccttgtct ggtgccaata acacgacaga ggagacctgg tatgactcg | EDNA VISM: Homo some control of the | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt cgagctcctg ctcccagagg tcctgtgatt caaagactcc catggaggta | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca gatgttgatc aagggcaagt gggttggtgg tatctgatcc gacgagaggc | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa ctaatgacca gtgctgtgat atgctgaaaa tggagacgct ccacggagca | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg agaggaggat caaaacctct gctaaagcca gcccacagag atacagtgac | 120 180 240 300 360 420 480 540 600 660 720 |
| 314 315 317 318 320 322 324 326 328 330 332 334 336 338 340 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg gccatgaagg taccttgtct ggtgccaata acacgacaga ggagacctgg | EDNA VISM: Homo some control of the | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt cgagctcctg ctcccagagg tcctgtgatt caaagactcc catggaggta | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca gatgttgatc aagggcaagt gggttggtgg tatctgatcc gacgagaggc | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa ctaatgacca gtgctgtgat atgctgaaaa tggagacgct ccacggagca | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg agaggaggat caaaacctct gctaaagcca gcccacagag atacagtgac | 120 180 240 300 360 420 480 540 600 |
| 314 315 317 318 320 322 324 326 328 330 332 334 336 338 340 342 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg gccatgaagg taccttgtct ggtgccaata acacgacaga ggagacctgg tatgactcg | DNA IISM: Homo s ENCE: 6 tccgcagcac actggtcaag gtcccatctt tgactcggca aggaggtgct agatcaagat acaagataaa ccaacgtcat ttgacctgga cgtacttcct tgggtgtgaa gggtgaaggc tggacaagca | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt cgagctcctg ctcccagagg tcctgtgatt caaagactcc catggaggta gatccaggag | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca gatgttgatc aagggcaagt gggttggtgg tatctgatcc gacgagaggc ctggtggagg | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa ctaatgacca gtgctgtgat atgctgaaaa tggagacgct ccacggagca ccattgtctt | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg agaggaggat caaaacctct gctaaagcca gcccacagag atacagtgac gccaatgaac | 120 180 240 300 360 420 480 540 600 660 720 |
| 314 315 317 318 320 322 324 326 328 330 332 334 336 338 340 342 344 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg gccatgaagg taccttgtct ggtgccaata acacgacaga ggagacctgg tatgactcgc attggggtt | DNA IISM: Homo services of the content of the cont | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt cgagctcctg ctcccagagg tcctgtgatt caaagactcc catggaggta gatccaggag cttggggatc | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca gatgttgatc aagggcaagt gggttggtgg tatctgatcc gacgagaggc ctggtggagg caacctccaa | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa ctaatgacca gtgctgtgat atgctgaaaa tggagacgct ccacggagca ccattgtctt aaggggtgct | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg agaggaggat caaaacctct gctaaagcca gccacagag atacagtgac gccaatgaac gatgtatggg | 120 180 240 300 360 420 480 540 660 720 780 840 900 |
| 314 315 317 318 320 322 324 326 328 330 332 334 336 340 342 344 346 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg gccatgaagg taccttgtct ggtgccaata acacgacaga ggagacctgg tatgactcgc attggggtt cacaaggaga | DNA IISM: Homo s ENCE: 6 tccgcagcac actggtcaag gtcccatctt tgactcggca aggaggtgct agatcaagat acaagataaa ccaacgtcat ttgacctgga cgtacttcct tgggtgtgaa gggtgaaggc tggacaagca agtttgagaa cggggaagac | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt cgagctcctg ctcccagagg tcctgtgatt caaagactcc catggaggta gatccaggag cttggggatc cctcctggcc | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca gatgttgatc aagggcaagt gggttggtgg tatctgatcc gacgagaggc ctggtggagg caacctccaa cgggcctgtg | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa ctaatgacca gtgctgtgat atgctgaaaa tggagacgct ccacggagca ccattgtctt aaggggtgct ccgcacagac | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg agaggaggat caaaacctct gctaaagcca gcccacagag atacagtgac gccaatgaac gatgtatggg taaggccacc | 120 180 240 300 360 420 480 540 660 720 780 840 900 960 |
| 314 315 317 318 320 322 324 326 328 330 332 334 336 342 344 346 348 350 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg gccatgaagg taccttgtct ggtgccaata acacgacaga ggagacctgg tatgactcgc attggggtt cacaaggaga ccccaggga ttcctaaagc gtccgggatg | EDNA SISM: Homo since: 6 tccgcagcac actggtcaag gtcccatctt tgactcggca aggaggtgct agatcaagat acaagataaa ccaacgtcat ttgacctgga cgtacttcct tgggtgtgaa gggtgaaggc tggacaagca agtttgagaa cggggaagac tggctggcc cctttgcct | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt cgagctcctg ctcccagagg tcctgtgatt caaagactcc catggaggta gatccaggag cttggggatc cctcctggcc ccagctggtg ggccaaggag | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca gatgttgatc aagggcaagt gggttggtgg tatctgatcc gacgagaggc ctggtggagg caacctccaa cgggcctgtg cagatgttca aaagcgcct | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa ctaatgacca gtgctgtgat atgctgaaaa tggagacgct ccacggagca ccattgtctt aaggggtgct ccgcacagac ttggagatgg ctatcatctt | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg agaggaggat caaaacctct gctaaagcca gccacagag atacagtgac gccaatgaac gatgtatggg taaggccacc tgccaagcta cattgatgag | 120 180 240 300 360 420 480 540 660 720 780 840 900 960 1020 |
| 314 315 317 318 320 322 324 326 328 330 332 334 336 342 344 346 348 350 352 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg gccatgaagg taccttgtct ggtgccaata acacgacaga ggagacctgg tatgactcgc attggggtt cacaaggaga ccccaggga ttcctaaagc gtccgggatg ttggatgcca | EDNA VISM: Homo some control of the | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt cgagctcctg ctcccagagg tcctgtgatt caaagactcc catggaggta gatccaggag cttggggatc cctcctggcc ccagctggtg ggccaaggag gcgctttgac | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca gatgttgatc aagggcaagt gggttggtgg tatctgatcc gacgagaggc ctggtggagg caacctccaa cggcctgtg cagatgttca aaagcgccct agtgagaagg | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa ctaatgacca gtgctgtgat atgctgaaaa tggagacgct ccacggagca ccattgtctt aaggggtgct ccgcacagac ttggagatgg ctatcatctt ctggggaccg | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg agaggaggat caaaacctct gctaaagcca gccacagag atacagtgac gccaatgaac gctaatgac gatgtatggg taaggccacc tgccaagcta cattgatgag ggaggtgcag | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 |
| 314 315 317 318 320 322 324 326 328 330 332 334 336 342 344 346 348 350 352 354 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg gccatgaagg taccttgtct ggtgccaata acacgacaga ggagacctgg tatgactcgc attggggtt cacaaggagt tcacaaggaga tcccagggat ttcctaaagc gtccgggatg ttggatgcca aggacaatgc | EDNA VISM: Homo and the state of the state | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt cgagctcctg ctcccagagg tcctgtgatt caaagactcc catggaggta gatccaggag cttggggatc cctcctggcc ccagctggtg ggccaaggag gcgctttgac gaaccagctg | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca gatgttgatc aagggcaagt gggttggtgg tatctgatcc gacgagaggc ctggtggagg caacctccaa cgggcctgtg cagatgttca aaagcgcctt agtgagaagg gatggcttcc | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa ctaatgacca gtgctgtgat atgctgaaaa tggagacgct ccacggagca ccattgtctt aaggggtgct ccgcacagac ttggagatgg ctatcatctt ctggggaccg agcccaacac | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg agaggaggat caaaacctct gctaaagcca gccacagag atacagtgac gccaatgaac gatgtatggg taaggccacc tgccaagcta cattgatgag ggaggtgcag ccaagttaag | 120 180 240 300 360 420 480 540 660 720 780 840 900 960 1020 1080 1140 |
| 314 315 317 318 320 322 324 326 328 330 332 334 336 342 344 346 348 350 352 354 | <212> TYPE: <213> ORGAN <400> SEQUE gattcgctgc gaggttttcc ctcccgcctg gagagtccag ggaattgggg ctggacagtg gccatgaagg taccttgtct ggtgccaata acacgacaga ggagacctgg tatgactcgc attggggtt cacaaggaga ccccaggga ttcctaaagc gtccgggatg ttggatgcca | EDNA VISM: Homo and the state of the state | ggccggagct agaaggcttt ctgcccgctc ggagaagatg caagatgtcc catgaagagt agagaacagt cgagctcctg ctcccagagg tcctgtgatt caaagactcc catggaggta gatccaggag cttggggatc cctcctggcc ccagctggtg ggccaaggag gcgctttgac gaaccagctg | aagaaagacg ctccaggaaa gcgaccgtgt acggaggaga gaagtgttga gagaaaatca gatgttgatc aagggcaagt gggttggtgg tatctgatcc gacgagaggc ctggtggagg caacctccaa cgggcctgtg cagatgttca aaagcgcctt agtgagaagg gatggcttcc | gtattaatct tgaatctgct gggatgaggc tcatccagcg gagtcaccca aagtgaacaa ctaatgacca gtgctgtgat atgctgaaaa tggagacgct ccacggagca ccattgtctt aaggggtgct ccgcacagac ttggagatgg ctatcatctt ctggggaccg agcccaacac | cccgttgcgg gccgaatatt cgagcaagat cacacggctg tgagctccaa gaccctgccg agaggaggat caaaacctct gctaaagcca gccacagag atacagtgac gccaatgaac gatgtatggg taaggccacc tgccaagcta cattgatgag ggaggtgcag ccaagttaag | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 |

| 358 | cttgaccgca agatagagtt | cccataccc | aatragraga | cccaaaccaa | aatcatocao | 1260 |
|-----|---|------------|------------|------------|------------|------------|
| | atccactccc gaaagatgaa | | | | | 1320 |
| | acagatgact tcaatggggc | | | | | 1380 |
| | ctgcgcaggg gtgccacgga | | | | | 1440 |
| | | | | | | 1500 |
| | caggccaaga agaaagccaa ctcacggctg aagtgcgcaa | | | | cagececage | 1545 |
| | | taaaayatyy | tttagggtcc | etgee | | 1343 |
| | <210> SEQ ID NO: 7 <211> LENGTH: 1341 | | | | | |
| | <211> LENGIH: 1341 <212> TYPE: DNA | | | | | |
| | <213> ORGANISM: Homo s | aaniana | | | | |
| | | saprens | | | | |
| | <400> SEQUENCE: 7 | antanaaaaa | 2002202100 | 22++000000 | anaataataa | 60 |
| | gaattccggc gaccgtgtgg | | | | | 120 |
| | agatgtccac ggaggagatc | | | | | |
| | tgaagagtga agtgttgaga | | | | | 180 |
| | agaacagtga gaaaatcaaa | | | | | 240 |
| | agctcctgga tgttgatcct | | | | | 300 |
| | cccagaggaa gggcaagtgt | | | | | 360 |
| | ctgtgattgg gttggtggat | | | | | 420 |
| | aagactccta tctgatcctg | | | | | 480 |
| | tggaggtaga cgagaggccc | | | | | 540 |
| | tccaggagct ggtggaggcc | | | | | 600 660 |
| | tggggatcca acctccaaaa | | | | | |
| - | tcctggcccg ggcctgtgcc | | | | | 720 |
| | agctggtgca gatgttcatt | | | | | 780 |
| | ccaaggagaa agcgcctct | | | | | 840 |
| | gctttgacag tgagaaggct | | | | | 900 |
| | accagctgga tggcttccag | | | | | 960 |
| | tggacatcct ggaccccgcc | | | | | 1020 |
| | cgatgcccaa tgaggaggcc | | | | | 1080 |
| | tcagtcctga cgtgaactac | | | | | 1140 |
| | agtgcaaggc tgtgtgtgt | | | | | 1200 |
| | tcacccacga ggactacatg | | | | | 1260 |
| | tacaatacta cgcctaggca | | eccagtete | acggergaag | tgcgcaataa | 1320 |
| | aagatggttt agggggaatt | C | | | | 1341 |
| | <210> SEQ ID NO: 8 | | | | | |
| | <211> LENGTH: 1591 | | | | | |
| | <212> TYPE: DNA | niona | | | | |
| | <213> ORGANISM: Homo s <400> SEQUENCE: 8 | saprens | | | | |
| | | 0000000000 | aaaaaaataa | tagggtassa | agtagggatt | 60 |
| | ggcacgagga ttcgctgctc | | | | | 120 |
| | tgtggggaga ggttttccac | | | | | 180 |
| | cgttgcggct cccgcctggt | | | | | 240 |
| | cgaatattga gagtccagtg | | | | | 300 |
| | agcaagatgg aattggggag | | | | | 360 |
| | cacggctgct ggacagtgag | | | | | 420 |
| | agetecaage catgaaggae | | | | | 480 |
| | ccctgccgta ccttgtctcc | | | | | 540 |
| | aggaggatgg tgccaatatt | | | | | |
| 448 | aaacctctac acgacagacg | Lacticcitc | cigigatigg | greggegat | gergaaaage | 600 |

VERIFICATION SUMMARY

DATE: 02/26/2005 TIME: 10:45:32

PATENT APPLICATION: US/10/523,706

Input Set : A:\EX03-059C-USpatentin.txt Output Set: N:\CRF4\02262005\J523706.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date